

In The Claims

Please replace claims 1, 2, 7 and 13 as shown below. A marked up version of the amended claims is attached to this Amendment.

1 1. (Amended) A system for distributing digital subscriber line
2 (XDSL) signals to end users over a telephone wiring plant comprising:
3 a central office for receiving video signals from a video source, the
4 central office including a first XDSL transmission unit for transmitting the received
5 video signals on a twisted pair copper cable along with other telephony and digital
6 data signals, and receiving data signals from end users;
7 at least one end user location having a second XDSL transmission unit
8 for receiving video signals from the twisted pair copper cable and transmitting data
9 signals to the central office; and
10 a regenerator connected to the twisted pair copper cable and located
11 a predetermined distance from the central office, the regenerator comprising:
12 a receiver for receiving XDSL signals transmitted on the
13 twisted pair copper cable from either the central office or the end user;
14 a decoder for decoding the payload of a received XDSL signal
15 into base data;
16 an encoder for repackaging and encoding the base data into a
17 desired protocol format; and
18 a line driver for retransmitting the encoded signal onto the
19 twisted pair copper cable for distribution to an original destination, wherein
20 the predetermined distance for the location of the regenerator corresponds to
21 a point on the twisted pair cable where the signal-to-noise ratio of a
22 transmitted XDSL signal reaches a threshold of minimum acceptable signal
23 quality.

1 2. (Amended) The system of claim 1 wherein the central office
2 transmits XDSL signal using an asynchronous transfer mode (ATM) protocol, and
3 the regenerator encoder is arranged to selectively repack the base data into either
4 the ATM protocol format or a direct transmission protocol format depending on the
5 protocol requirements of the destination original terminal.

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1 7. (Amended) A method for distributing digital subscriber line
2 (XDSL) signals to end users over a telephone wiring plant comprising:
3 receiving video signals at a central office from a video source;
4 transmitting the received video signals on a twisted pair copper cable
5 along with other telephony and digital data signals as an XDSL type signal to a
6 terminal located at an end user site, and receiving data signals on the twisted pair
7 copper cable at the central office from an end user terminal;
8 coupling a signal regenerator unit to the twisted pair copper cable at
9 a distance from the central office corresponding to a point on the twisted pair cable
10 where the signal-to-noise ratio of a transmitted XDSL signal reaches a threshold of
11 minimum acceptable signal quality;
12 receiving transmitted XDSL signals at the regenerator, and decoding
13 the received signals into base data;
14 repackaging and encoding the base data into an XDSL signal having
15 a desired protocol format; and
16 retransmitting the XDSL signal to the end user terminal.

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1 13. (Amended) A regenerator for use in a digital subscriber line
2 (XDSL) signal type signal distribution system, the distribution system including a
3 central office for transmitting video signals on a twisted pair copper cable along with
4 other telephony and digital data signals to at least one end user location, the
5 regenerator comprising:
6 a receiver for receiving XDSL signals transmitted on the twisted pair
7 copper cable from either the central office or the end user;
8 a decoder for decoding the payload of a received XDSL signal into
9 base data;
10 an encoder for repackaging and encoding the base data into a desired
11 protocol format; and
12 a line driver for retransmitting the encoded signal onto the twisted pair
13 copper cable for distribution to an original destination, wherein a predetermined

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14 distance for the location of the regenerator corresponds to a point on the twisted pair
15 cable where the signal-to-noise ratio of a transmitted XDSL signal reaches a threshold
16 of minimum acceptable signal quality.
